

(12) PUBLISHED INTERNATIONAL APPLICATION IN ACCORDANCE WITH
THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Office



(43) International Publication Date

March 11, 2004 (03/11/2004)

PCT

(10) International Publication Number

WO 2004/021214 A1

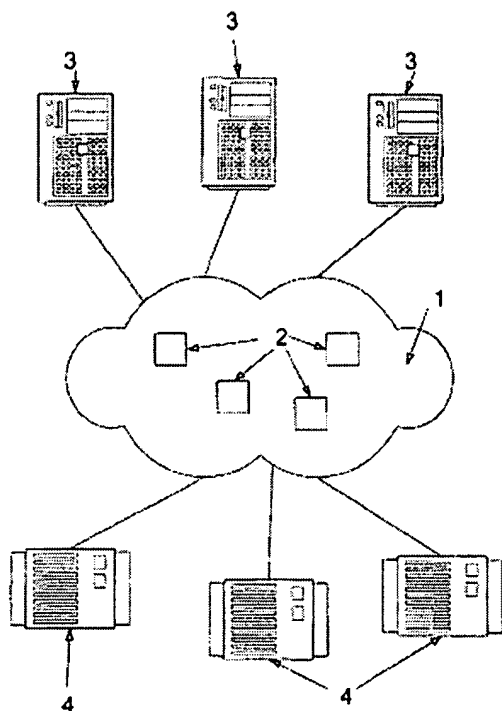
(51)	International Patent Classification:	G06F 17/30, 9/46	(71)	Applicant and
(21)	International File Number:	PCT/EP2003/008635	(72)	Inventor: BRINKMANN, André [DE/DE]; Bürtervenn 23c, 33758 Schloss Holte (DE), SCHEIDELER, Christian [DE/DE]; Harbortweg 13a, 33102 Paderborn [DE/DE]; MEYER AUF DER HEIDE, Friedhelm [DE/DE]; Röntgenstr. 3, 33129 Delbrück (DE), RÜCKERT, Ulrich [DE/DE]; Meininger Weg, 16 59494 Soest (DE).
(22)	International Filing Date:	August 5, 2003 (08/05/2003)		
(25)	Language of Filing:	German	(72)	Inventor; and
(26)	Publication Language:	German	(75)	Inventor/Applicant (only for US): SALZWEDEL, Kay [DE/DE]; Dr.-Rörig-Damm 66, 33102 Paderborn (DE).
(30)	Information of Priority:	August 8, 2002 (08/08/2002) DE	(74)	Joint Representative: BRINKMANN, André; Bürtervenn 23c, 33758 Schloss Holte (DE).

[Continued on the next page]

(54) Title: METHOD AND ARRANGEMENT FOR RANDOMLY STORING DATA

(54) Title: METHOD AND ARRANGEMENT FOR RANDOMLY STORING DATA

WO 2004/021214 A1



(57) Abstract: The invention relates to a method and an arrangement for randomly storing data in storage networks and/or an intranet and/or the Internet, a corresponding computer program product, and a corresponding computer-readable storage medium, which are particularly suitable for distributing and retrieving data in error-tolerant and faulty systems such as storage networks or the Internet. According to the inventive method for randomly storing data in storage networks and/or an intranet and/or the Internet, one or multiple intervals, the total length of which corresponds to the relative capacity of the system, is/are assigned to each storage system. Said intervals are represented in a $[0,1]$ interval but can overlap with other intervals as opposed to existing strategies. A real point is then assigned to each data block within the $[0,1]$ interval by means of a (pseudo)random function. Optionally, said point can be part of several intervals of storage systems. A uniform placement strategy is used in order to assign the data block to one of said storage systems if that is the case. The interval lengths are adjusted correspondingly if the relative capacities of the storage systems change.

57) Abstract: The invention relates to a method and an arrangement for randomly storing data in storage networks and/or an intranet and/or Internet, a corresponding computer program product, and a corresponding computer-readable storage medium, which are particularly suitable for distributing and retrieving data in error-tolerant and faulty systems such as storage networks or the Internet. According to the inventive method for randomly storing data in storage networks and/or an

[Continued on the next page]

WO 2004/021214 A1



(81) Designated States (national): [see source for codes]

-- ARIPO-Patent [see source for codes]
Eurasian patent [see source for codes]
European patent see source for codes]
OAPI patent [see source for codes]

(84) Designated States (regional):
ARIPO-Patent [see source for codes]
Eurasian patent [see source for codes]
European patent see source for codes]
OAPI patent [see source for codes]

-- as regards the applicant's authorization to claim the priority of an earlier application (Rule 4.17 Figure iii) for the following designated US state
Declaration as to the identity of the inventor (Rule 4.17 Figure iv) only for US

Declarations pursuant to Rule 4.17:

-- as regards the applicant's authorization with international search report to apply for and obtain a patent (Rule 4.17 Figure ii) for the following designated states [see source for codes]

Published:

-- With international search support\
-- prior to expiration of period applicable for changes to claims; publication is repeated if changes are received

To explain the two-letter codes and the other abbreviations, reference is made at the beginning of each regular edition of the PCT Gazette to the declarations ("Guidance Notes on Codes and Abbreviations).

intranet and/or the Internet, one or multiple intervals, the total length of which corresponds to the relative capacity of the system, is/are assigned to each storage system. Said intervals are represented in a [0,1) interval but can overlap with other intervals as opposed to existing strategies. A real point is then assigned to each data block within the [0,1) interval by means of a (pseudo)random function. Optionally, said point can be part of multiple intervals of storage systems. A uniform placement strategy is used in order to assign the data block to one of said storage systems if that is the case. The interval lengths are adjusted correspondingly if the relative capacities of the storage systems change.